ESO 920

(For use with
ESO-921)

1982 CUSTOM RATE AND OPERATING COST ESTIMATES FOR NEW MACHINERY IN OHIO*

Revised and Adopted for Ohio

by

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The suggested custom rates provided in the following tables have been calculated by formula from the most recent farm machinery, energy, and labor prices available (see ESO-921 for estimated new costs for machinery). In times of stable price levels, surveys of market custom rates are a reasonable method for determining charges; however, in today's world of drastically changing costs, any survey is out of date before the summary is complete and made available. We feel that our method of estimating custom rates can provide reasonable estimates as a base for determining a negotiated rate between a purchaser and a supplier of custom services.

You can expect to pay somewhat higher custom rates again this year. Although the interest rate, fuel costs, and labor costs are approximately the same as last year, there have been increases in interest rates and the cost of farm machinery that show up as increased use costs. New equipment prices were obtained from several regional sales offices of farm equipment manufacturers and these prices were averaged for each tractor or implement.

The items listed in the tables include a description of the implement, the tractor or combine base used with the implement, and the cash operating, total, and suggested custom rate costs on a per acre and per hour basis. Also included on a per acre or per hour basis are the estimated costs of overhead, hours of labor, repairs, maintenance, fuel, and lubrication.

Machine and Tractor Identification

The name of the implement and the size of the tractor or combine base is provided in columns 1 and 2. A self-propelled implement such as a swather will have three dashes (---) indicating that no tractor is used. Combines are presented slightly differently. The head of the combine is identified

Overhead Cost/Acre

The overhead cost per acre is the total annual overhead cost of the tractor and implement on a per acre basis typical of a commercial farmer.

Labor Hours/Acre

This represents an estimate of the required hours of labor on one acre with a specific machine. It includes a measure for travel and set up time as well as direct use machine field time.

Repair and Maintenance/Acre

This is an estimate on a per acre basis for the average cost of repairs and maintenance of the tractor and implement as used on one acre.

Fuel and Lube/Acre

This is an estimate of fuel (diesel) and oil costs per acre where diesel fuel is estimated to cost $1.20 per gallon and oil cost is calculated to be 10 percent of the fuel costs.

Custom rates will vary from area to area and are always a function of the demand for and the supply of those custom services. The charges for the services may be determined in different ways for different situations. For example, if two farmers are trading services they may price their services on a cash cost basis. This assumes that the value of their labor and machinery overhead would be approximately the same. Cash cost and labor expenses could only be expected to be recouped if they were being paid by an insurance settlement to replant a crop. The assumption here is that the ownership costs already are considered as normal production costs.

in the first column, and the size of the base unit is given in the second column. For example, the "COMBINE SM GRAIN MED" describes a medium sized combine head used for harvesting small grains. The second column describes the base combine as a medium sized unit. The medium sized combine base is also used on the medium sized soybean head and the four-row corn heads.

Cash Operating Costs

These costs, provided on a per hour and per acre basis, are estimates of the costs of fuel (diesel), oil, and repairs for the tractor and the implement as used for the particular function described. Labor cost estimates are not included in this figure.

Total Costs

Total costs provide estimates of all costs associated with carrying out the particular function. These costs include cash operating costs, labor, and overhead costs for the tractor and implement. Labor is valued at $5.20 per hour for unskilled labor and $7.00 per hour for skilled labor.

Suggested Custom Rates

The suggested custom rate values include an additional 20 percent over the total cost figures. This margin provides a profit to the custom operator and a return for the risk and travel expenses involved. Many times a custom operator will cover more acres annually than a commercial farmer. Therefore, for popular custom services the overhead costs may be spread over more acres and hours, thereby reducing the total costs.

MACHINE	TRACTOR HP	CASH OPERATING COSTS PER HOUR	CASH OPERATING COSTS PER ACRE	TOTAL COSTS PER HOUR	TOTAL COSTS PER ACRE	SUGGESTED CUSTOM RATES PER HOUR	SUGGESTED CUSTOM RATES PER ACRE	OVERHEAD COST/ACRE	MANHOURS /ACRE	REPAIR+MAINT. /ACRE	FUEL+LUBE /ACRE
PLOW 2-16	40	4.57	3.93	16.67	14.36	19.83	17.09	5.86	.879	1.20	2.73
PLOW 3-16	60	6.31	3.96	22.38	12.82	26.54	15.21	5.82	.584	1.24	2.72
PLOW 4-16	75	9.56	4.11	30.94	13.30	36.43	15.66	6.31	.439	1.56	2.55
PLOW 5-16	100	13.19	4.54	40.72	14.01	47.97	16.51	7.65	.351	1.81	2.73
PLOW 6-16	120	15.84	4.54	46.35	13.28	54.25	15.54	7.22	.292	1.81	2.72
PLOW 7-16	140	17.97	4.41	50.77	12.47	59.67	14.66	6.75	.251	1.69	2.72
PLOW 8-16	160	20.82	4.48	56.47	12.14	66.45	14.28	6.52	.219	1.75	2.72
PLOW 9-18	225	28.67	4.87	78.71	13.36	92.22	15.65	7.59	.173	1.84	3.03
PLOW 10-18	225	23.80	4.55	83.02	12.68	97.83	14.95	7.32	.156	1.83	2.72
PLOW 12-18	275	35.56	4.53	97.21	12.38	116.10	14.78	7.17	.130	1.75	2.77
CHISEL PLOW 10 FT	140	15.24	3.49	40.60	9.30	46.86	10.74	4.60	.234	.95	2.54
CHISEL PLOW 15 FT	120	13.73	2.10	39.52	6.04	46.83	7.16	3.13	.156	.65	1.45
CHISEL PLOW 17 FT	140	15.81	2.13	44.06	5.94	52.12	7.03	3.09	.138	.64	1.49
CHISEL PLOW 20 FT	160	18.83	2.16	51.93	5.95	61.02	6.99	3.19	.117	.71	1.45
CHISEL PLOW WING 24	225	25.07	2.39	71.89	6.86	85.32	8.15	3.96	.097	.69	1.70
CHISEL PLOW WING 29	250	28.73	2.27	84.76	6.70	100.12	7.91	4.01	.081	.71	1.56
CHISEL PLOW WING 35	300	33.64	2.20	94.93	6.22	112.63	7.37	3.67	.067	.65	1.56
FIELD CULTIVATOR 12	75	8.29	1.37	25.21	4.16	28.96	4.78	1.92	.168	.39	.98
FIELD CULTIVATOR 18	100	12.15	1.39	36.06	4.13	43.26	4.96	2.13	.117	.48	.91
FIELD CULTIVATOR 28	160	18.90	1.39	49.26	3.63	59.11	4.35	1.85	.075	.46	.93
FIELD CULTIVATOR 37	225	25.91	1.44	67.21	3.75	80.67	4.50	2.30	.001	.45	.99
FIELD CULTIVATOR 50	250	31.51	1.30	93.49	3.86	123.68	5.10	2.34	.042	.48	.82
DISK 10 FT	60	7.30	1.51	25.80	5.32	30.96	6.39	2.72	.210	.52	.98
DISK 15 FT	75	9.96	1.28	35.82	4.62	43.00	5.54	2.65	.131	.52	.77
DISK 17 FT	75	10.58	1.28	39.27	4.76	47.11	5.72	2.84	.124	.56	.72
DISK 20 FT	100	14.38	1.48	50.82	5.24	60.97	6.29	3.21	.105	.67	.82
DISK 21 FT	100	14.99	1.47	54.19	5.32	64.98	6.38	3.33	.100	.69	.78
DISK 24 FT	120	17.52	1.51	61.18	5.26	73.25	6.29	3.30	.088	.69	.82
DISK 28 FT	140	20.30	1.50	69.64	5.13	83.51	6.15	3.24	.075	.69	.82
DISK 32 FT	160	23.37	1.51	77.65	5.00	92.95	5.99	3.16	.066	.69	.82
DISK 40 FT	180	27.64	1.43	94.32	4.86	126.21	6.51	3.16	.053	.69	.74
DISK OFFSET 14 FT	140	17.33	2.84	52.61	8.61	63.16	10.34	4.91	.167	1.02	1.81
DISK OFFSET 16 FT	160	19.71	2.82	56.80	8.14	68.11	9.76	4.55	.146	1.01	1.81
DISK OFFSET 18 FT	180	22.31	2.84	63.95	8.14	76.61	9.75	4.63	.130	1.03	1.82
DISK-WING OFFSET 21	225	26.64	2.91	80.98	8.84	97.06	10.59	5.35	.111	.96	1.94
DISK-WING OFFSET 23	225	27.42	2.73	85.47	8.52	102.36	10.20	5.26	.102	.96	1.78
LANDPLANE 45-12 FT	180	19.35	3.02	59.25	9.26	71.10	11.11	5.36	.169	.80	2.23
LANDPLANE 54-12 FT	225	23.32	3.64	81.87	12.79	98.24	15.35	8.27	.169	.86	2.78
LANDPLANE 54-15 FT	225	23.38	2.92	83.44	10.43	100.13	12.52	6.81	.135	.69	2.23
LANDPLANE 75-14 FT	225	23.48	3.15	85.32	11.51	103.10	13.81	7.61	.145	.76	2.33
SPRINGTOOTH DRAG 30	60	7.02	.44	44.02	2.75	52.83	3.30	1.96	.067	.14	.30
SPRINGTOOTH DRAG 48	75	9.48	.31	63.57	2.10	76.23	2.52	1.60	.036	.12	.20

If farmers trading machinery use consider their inputs, labor, and machinery overhead unequal, they should base their rates on a total cost or a suggested custom rate basis.

The following tables are the results of the projections for 1982.

PLANTING EQUIPMENT

MACHINE	TRACTOR HP	CASH OPERATING COSTS PER HOUR	CASH OPERATING COSTS PER ACRE	TOTAL COSTS PER HOUR	TOTAL COSTS PER ACRE	SUGGESTED CUSTOM RATES PER HOUR	SUGGESTED CUSTOM RATES PER ACRE	OVERHEAD COST/ACRE	MANHOURS /ACRE	REPAIR+MAINT. /ACRE	FUEL+LUBE /ACRE
CORN PLANTER 4-38	40	9.07	1.88	45.53	9.42	54.64	11.30	5.86	.240	1.22	.66
CORN PLANTER 6-38	60	13.16	1.91	61.37	8.46	73.21	10.09	5.53	.160	1.16	.66
CORN PLANTER 6-30	60	13.37	2.34	62.49	10.91	74.24	12.96	7.16	.203	1.51	.83
CORN PLANTER 8-30	75	18.31	2.40	84.78	11.10	101.50	13.29	7.64	.152	1.62	.78
MIN-TIL PLANTER 8-38	75	19.72	2.66	92.55	12.47	118.84	16.01	8.72	.156	1.86	.80
MIN-TIL PLANTER 12-3	120	30.73	3.45	136.61	15.33	198.18	22.25	10.97	.130	2.38	1.07
MIN-TIL PLANTER 4-38	40	10.17	2.71	51.60	13.73	58.59	15.58	8.86	.309	1.86	.84
MIN-TIL PLANTER 6-38	60	15.31	2.71	73.23	12.98	86.17	15.27	8.83	.206	1.87	.84
MIN-TIL PLANTER 6-30	60	14.84	3.33	70.60	15.85	79.33	17.81	10.70	.260	2.25	1.07
MIN-TIL PLANTER 8-30	75	20.35	3.43	96.06	16.17	107.42	18.09	11.38	.195	2.43	1.00
POTATO ROW MARKER 4R	120	14.83	2.33	57.86	11.62	67.49	13.55	6.30	.243	1.07	1.91
POTATO PLANTER 4 ROW	120	23.29	6.08	82.13	21.44	95.97	25.06	11.41	.547	3.60	2.48
BEET PLANTER 12 ROW	100	14.82	3.17	55.86	11.97	67.03	14.35	6.93	.256	1.48	1.70
GRAIN DRILL PW 14 FT	40	8.11	1.46	33.52	6.01	40.08	7.19	3.16	.199	.89	.57
GRAIN DRILL PW 16 FT	60	15.33	2.41	58.56	9.19	70.25	11.03	5.57	.174	1.66	.75
GRAIN DRILL PW 20 FT	75	17.48	2.19	64.29	8.07	76.98	9.67	4.90	.139	1.45	.75
GRAIN DRILL PW 24 FT	75	20.84	2.18	77.96	8.16	93.19	9.75	5.16	.116	1.56	.62
GRAIN DRILL PW 28 FT	100	25.67	2.30	92.29	8.28	110.24	9.89	5.28	.100	1.59	.71

MISCELLANEOUS

MACHINE	TRACTOR HP	CASH OPERATING COSTS PER HOUR	CASH OPERATING COSTS PER ACRE	TOTAL COSTS PER HOUR	TOTAL COSTS PER ACRE	SUGGESTED CUSTOM RATES PER HOUR	SUGGESTED CUSTOM RATES PER ACRE	OVERHEAD COST/ACRE	MANHOURS /ACRE	REPAIR+MAINT. /ACRE	FUEL+LUBE /ACRE
LIGHT TRUCK	---	11.10	7.32	21.18	13.98	27.44	18.11	3.22	.660	3.84	3.48
MEDIUM TRUCK	---	19.82	13.08	34.90	23.04	46.00	30.36	6.53	.660	7.85	5.23
HEAVY TRUCK	---	34.88	23.02	57.97	38.26	77.00	50.82	11.81	.660	14.31	8.71
MANURE SPREADER 150	75	7.77	2.23	27.63	7.91	34.50	9.88	4.17	.292	.53	1.70
MANURE SPREADER 225	100	11.08	3.17	39.05	11.19	49.03	14.05	6.49	.292	.90	2.27
MANURE SPREADER 400	100	11.42	2.45	45.08	9.69	65.18	14.00	6.09	.219	.75	1.70
WAGON	40	4.46	1.18	21.75	5.75	26.23	6.93	1.82	.529	.34	.84
FORAGE WAGON 14 FT	40	4.88	2.95	24.67	14.91	31.88	19.27	8.82	.604	1.04	1.91
FORAGE WAGON 16 FT	40	4.98	3.01	25.73	15.55	33.37	20.17	9.40	.604	1.09	1.91

MAINTENANCE EQUIPMENT

MACHINE	TRACTOR HP	CASH OPERATING COSTS PER HOUR	CASH OPERATING COSTS PER ACRE	TOTAL COSTS PER HOUR	TOTAL COSTS PER ACRE	SUGGESTED CUSTOM RATES PER HOUR	SUGGESTED CUSTOM RATES PER ACRE	OVERHEAD COST/ACRE	MANHOURS /ACRE	REPAIR+MAINT. /ACRE	FUEL+LUBE /ACRE
CULTIVATOR 4-38	40	5.00	1.02	13.98	4.07	23.88	4.86	1.95	.212	.37	.65
CULTIVATOR 6-38	60	7.36	1.00	25.30	3.57	31.53	4.28	1.84	.141	.35	.64
CULTIVATOR 6-30	60	7.17	1.23	25.14	4.32	30.07	5.17	2.16	.179	.42	.82
CULTIVATOR 8-30	75	9.07	1.17	30.66	3.95	36.73	4.74	2.09	.134	.43	.77
CULTIVATOR 12-30	140	16.82	1.45	49.60	4.26	66.61	5.72	2.35	.089	.49	.95
ROTARY HOE 16	40	4.86	.45	28.31	2.61	33.77	3.11	1.68	.092	.16	.29
POTATO CULT. 4 ROW	75	9.07	1.48	25.27	4.12	30.35	4.95	1.76	.170	.51	.97
BEET CULT. 12 ROW	100	12.34	2.06	47.86	7.98	57.43	9.57	5.02	.173	.74	1.32
BEET THINNER 6 ROW	100	16.21	7.72	62.96	29.98	75.56	35.98	18.80	.495	3.95	3.77
BEET THINNER 12 ROW	120	23.20	5.52	95.50	22.74	114.60	27.28	15.48	.248	3.26	2.26
SPRAYER 30 FT	40	6.90	.49	29.71	2.10	35.60	2.51	.99	.088	.26	.22
SPRAYER 50 FT	60	9.35	.40	32.71	1.38	39.23	1.65	.52	.053	.19	.20
SPRAYER HI PRES 50FT	60	9.84	.42	34.23	1.45	41.11	1.74	.66	.053	.22	.20
ANHYDROUS APPLICATOR	120	15.08	1.59	54.73	6.14	63.07	7.08	3.67	.143	.53	1.07
FERTILIZER SPADR 40	60	6.99	.18	44.98	1.16	131.98	3.40	.80	.034	.06	.12
SHREDDER 12 FT	60	7.31	1.68	23.48	6.76	35.27	8.08	3.83	.229	.59	1.09

HARVESTING EQUIPMENT

MACHINE	TRACTOR HP	CASH OPERATING COSTS PER HOUR	CASH OPERATING COSTS PER ACRE	TOTAL COSTS PER HOUR	TOTAL COSTS PER ACRE	SUGGESTED CUSTOM RATES PER HOUR	SUGGESTED CUSTOM RATES PER ACRE	OVERHEAD COST/ACRE	MANHOURS /ACRE	REPAIR+MAINT. /ACRE	FUEL+LUBE /ACRE
SWATHER 12 FT	---	8.60	1.48	53.84	9.25	64.15	11.03	6.88	.172	.80	.68
SWATHER 15 FT	---	8.97	1.23	57.58	7.92	68.37	9.40	5.97	.138	.69	.54
SWATHER-COND. 12 FT	---	8.17	1.50	49.82	9.13	59.42	10.89	6.68	.183	.77	.73
SWATHER-COND. 15 FT	---	9.04	1.33	58.25	8.54	69.46	10.19	6.45	.147	.74	.58
SWATHER 18 FT	---	9.01	1.03	58.16	6.66	69.66	7.98	5.04	.115	.58	.45
SWATHER 20 FT	---	9.20	.95	60.12	6.20	71.85	7.41	4.72	.103	.54	.41
1 TON STACKER	60	9.26	2.23	30.84	7.44	36.22	8.74	3.33	.268	1.09	1.15
3 TON STACKER	75	14.85	3.07	44.69	9.24	52.06	10.76	4.56	.230	1.84	1.23
6 TON STACKER	100	21.41	3.87	55.90	10.11	65.45	11.84	4.83	.201	2.44	1.43
BALER PTO TWINE	40	6.38	1.69	26.11	6.90	29.45	7.79	3.16	.294	.85	.84
ROUND BALER	60	9.22	1.99	31.23	6.74	36.41	7.85	3.50	.239	.96	1.02
ROTARY MOWER	40	4.94	1.81	18.28	6.70	21.84	8.01	2.98	.367	.65	1.16
RAKE (HYD)	40	4.93	1.41	17.21	4.93	23.31	6.68	2.03	.286	.51	.91
FORAGE HARV. 1 ROW	60	9.46	10.00	43.90	46.43	51.35	54.32	28.21	1.174	4.97	5.03
FORAGE HARV. 2 ROW	100	15.10	9.12	61.47	37.15	71.14	43.00	23.33	.671	4.34	4.79
FOR HARV 2 ROW SP	---	27.26	13.38	109.87	53.96	125.17	61.47	36.76	.545	8.59	4.80
FOR HAR 3 ROW SP	---	29.49	9.65	115.57	37.84	130.83	42.83	25.64	.363	5.98	3.67
FORAGE BLOWER LG	60	6.54	6.54	27.32	27.32	23.62	23.62	15.57	1.000	1.79	4.75
CORN PICKER 2-38	40	9.53	6.40	40.00	26.86	50.51	33.92	15.25	.745	4.27	2.13
PICKER-SHELLER 2-ROW	60	10.57	7.10	39.92	26.81	50.02	33.59	14.49	.745	3.90	3.19
COMBINE SM GRAIN SML	SML	27.98	6.83	70.37	17.18	83.08	20.28	8.45	.271	4.90	1.93
COMBINE SM GRAIN MED	MED	34.19	7.23	84.38	17.85	99.85	21.12	8.97	.235	5.22	2.01
COMBINE SM GRAIN LGE	LRG	41.15	6.53	100.19	15.90	119.55	18.97	8.13	.176	4.71	1.82
COMBINE SOYBEANS SML	SML	28.50	7.95	72.41	20.20	85.02	23.72	10.08	.310	5.74	2.21
COMBINE SOYBEANS MED	MED	34.69	8.39	86.32	20.87	101.73	24.60	10.60	.268	6.09	2.30
COMBINE SOYBEANS LGE	LRG	41.59	8.38	101.90	20.53	120.58	24.29	10.59	.224	6.06	2.31
COMBINE CORN 3-30 SM	SML	30.90	17.43	76.61	43.22	89.36	50.41	21.40	.626	12.96	4.47
COMBINE CORN 2-38 SM	SML	29.25	19.64	72.10	48.42	84.91	57.02	23.56	.745	14.32	5.32
COMBINE CORN 3-38 SM	SML	31.17	13.88	77.34	34.44	91.98	40.96	17.10	.494	10.35	3.53
COMBINE CORN 4-38 MD	MED	38.56	12.89	94.37	31.54	112.24	37.51	16.05	.371	9.71	3.18
COMBINE CORN 4-30 MD	MED	38.33	14.74	93.72	36.05	111.40	42.85	18.32	.427	11.09	3.66
COMBINE CORN 6-30 LG	LRG	46.80	12.00	113.04	28.98	134.28	34.43	14.99	.285	9.05	2.94
COMBINE CORN 8-30 LG	LRG	49.18	10.40	119.57	25.29	141.72	29.98	13.25	.235	7.97	2.43
COMBINE CORN 12-30 J	JMB	65.13	9.19	147.96	20.87	187.59	26.45	11.57	.016	6.35	2.23
POTATO HRVSTR. 2 ROW	120	18.36	7.37	83.65	33.60	97.39	39.12	18.47	1.338	3.56	3.82
BEET LIFTER 3 ROW	100	16.22	6.24	97.36	37.45	116.13	44.66	28.22	.427	3.19	3.05
BEET LIFTER 4 ROW	100	16.38	4.73	99.27	28.65	118.36	34.16	21.68	.320	2.44	2.29
BEET LIFTER 6 ROW	120	18.44	3.55	104.98	20.19	125.22	24.08	15.15	.213	1.72	1.83
BEET TOPPER 3 ROW	60	8.43	2.63	41.39	12.94	49.31	15.41	8.11	.313	1.15	1.49
BEET TOPPER 4 ROW	75	10.32	2.42	48.28	11.32	57.23	13.42	7.26	.234	1.03	1.39
BEET TOPPER 6 ROW	100	13.68	2.14	58.18	9.09	69.33	10.83	5.86	.156	.90	1.24
BEET WAGON 8 TON	75	8.08	2.33	37.58	10.84	44.89	12.96	7.01	.289	.62	1.71

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